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10/691,115

REMARKS

STATUS SUMMARY

Claims 1-27 are pending in the present application. The Examiner has rejected claims 10, 20, 22, 24, 25, and 27 under 35 U.S.C. § 112, second paragraph, claims 1, 3, 4, 8, 9, 11, 13, 14, 18, 19, and 21 as being anticipated by U.S. Patent No. 6,300,837 to *Sowlati et al.* ("Sowlati"), and claims 2, 12, and 23 under 35 U.S.C. § 103(a) as being unpatentable over *Sowlati*. Claims 5-7, 10, 15-17, and 20 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These formal matters identified in the Office Action are addressed herein below.

CLAIM REJECTIONS - 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 10, 20, 22, 24, 25, and 27 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicant regards as the invention. Accordingly, Applicants has amended claims 10, 20, 22, 24, 25, and 27 as follows to overcome the indefiniteness referred to by the Examiner.

As for claims 10, 20, and 27, the phrase "included in the feedback loop" has been added after the phrase "a transistor" in these claims, as well as changing "a transistor" to read as "a reference transistor". Support for these amendments may be found, for example, at page 2, lines 16-18, page 5, lines 17-19, page 10, lines 1-3, page 11, lines 8-11, and elsewhere throughout the specification.

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As for claim 22, this claim was amended to refer to determining if the input bias voltage current is below a predetermined level. Support for this amendment may be found, for example, at page 5, line 23, to page 6, line 2, and elsewhere throughout the specification. Claim 24 was amended to refer to mirroring the bias current I_{bias} to a reference current I_{ref} by a predetermined ratio. Support for this amendment may be found, for example, at page 5, lines 11-12, and elsewhere throughout the specification.

Claim 25 was amended to refer to the reference current I_{ref} being received at a transistor in a second material different from a first material wherein the reference current I_{ref} was generated. First, claims 25 and 26 were amended as to the first and second materials, *i.e.*, the designations as to which material was the first and which was the second were reversed, to make them consistent in this respect with claims 6, 7, 16, and 17. Second, support for the remaining aspects of these amendments may be found, for example, at page 5, lines 11-16, and elsewhere throughout the specification.

In view of the foregoing, Applicants respectfully submit that the rejections of claims 10, 20, 22, 24, 25, and 27 under 35 U.S.C. § 112, second paragraph, have been overcome, and requests that these rejections be withdrawn.

RESPONSE TO CLAIM REJECTIONS UNDER 35 USC § 102(e)

Claims 1, 3, 4, 8, 9, 11, 13, 14, 18, 19, and 21 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Sowlati*. Applicants respectfully traverse this rejection because *Sowlati* fails to teach each and every feature or element recited in the rejected claims.

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Claim 1 of the present application recites the following:

A constant current bias circuit associated with a linear power amplifier comprising:
an at least one resistor;
a capacitor coupled to the at least one resistor;
a bias voltage input terminal for receipt of a bias voltage connected to the at least one resistor; and
an at least one transistor connected to the at least one resistor by an electrical path resulting in a bias current when the bias voltage is present.

The Examiner states that as to claims 1, 11, and 21 of the pending application,

Fig. 2 of *Sowlati* discloses:

a power amplifier circuit comprising: an at least one resistor (128); a capacitor (134) coupled to the at least one resistor (128); a bias boosting voltage can be read as a bias voltage for generating a bias input terminal connected to the resistor (128); and an at least one transistor (123) connected to the at least one resistor (128) by an electrical path (line connected one end of resistor (128) to the base of transistor (123)) resulting in [a] bias current when the bias voltage is applied.

Sowlati does not, however, teach a bias current “in as complete detail as is contained in the ... claim” as required by MPEP § 2131. In the pending application, the bias current is described as being the “voltage at the 4.7 kilo-ohm resistor 120 divided by the resistance value (4.7 kilo-ohms),” where the voltage at the resistor 120 is equal to the divided bias voltage at the negative input terminal of op-amp 110. (Page 5, lines 4-7)

In FIG. 2 of *Sowlati*, “as the amplitude of the input signal V_{IN} is increased, the value of the voltage V_{BB} generated by the dc voltage source 140 is similarly increased, causing the dc current generated by voltage-controlled current source 138 to be increased to dynamically provide the extra dc bias current ultimately provided to the amplifier transistor 100.” Col. 3: lines 51-57. Thus, *Sowlati* does not teach either an input bias

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voltage or the generation of a bias current. In general, *Sowlati* expressly does not teach a constant current biasing circuit as *Sowlati* teaches a dynamic bias boosting circuit for increasing the dc bias current to an amplifying transistor in direct proportion to an increase in the input signal provided to a power amplifier.

The circuit claim 11 and the method claim 21 include similar limitations and thus these claims are also patently distinct from *Sowlati*. Claim 11 is a claim for a circuit that comprises means for receiving a bias voltage and an at least one transistor connected to an at least one resistor by an electrical path resulting in a bias current when the bias voltage is present, and claim 21 comprises receiving an input bias voltage and generating a bias current by at least one resistor connected by an electrical path to at least one transistor being in receipt of the input bias voltage. Accordingly, *Sowlati* also does not teach each and every feature or element recited in each of claims 11 and 21.

Thus, Applicants believe that independent claims 1, 11, and 21 are in condition for allowance and because all other claims are dependent directly or indirectly from allowable claims 1, 11, and 21, Applicants respectfully request that the Examiner withdraw the rejections of these claims.

CLAIM REJECTIONS - 35 U.S.C. § 103(a)

Claims 2, 12 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Sowlati*. Applicants respectfully traverse this rejection. Claims 2, 12 and 23 depend directly or indirectly from claims 1, 11, and 21, respectively, and therefore are patentable for at least the same reasons as set forth above with regard to claims 1, 11, and 21.

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In view of the foregoing, Applicant respectfully submits that claims 2, 12 and 23 are patentable over *Sowlati* under 35 U.S.C. § 103(a). Therefore, Applicants respectfully request that this rejection be withdrawn.

**RESPONSE TO CLAIMS OBJECTED TO
AS BEING DEPENDENT UPON A REJECTED BASE CLAIM**

The Examiner has objected to claims 5-7, 10, 15-17, and 20 as being dependent upon a rejected base claim, but has stated that claims 5-7, 10, 15-17, and 20 would be allowable if re-written in independent form including all of the limitations of the base claim and any intervening claims.

In response, Applicants thank the Examiner for allowing claims 5-7, 10, 15-17, and 20 if re-written; however, Applicant believes that re-writing claims 5-7, 10, 15-17, and 20 in independent form is not needed at this time because, as stated above, *Sowlati* fails to teach or describe all of Applicants' claim limitations in independent claims 1, 11, and 21. Thus, independent claims 1, 11, and 21 are in condition for allowance, and dependent claims 2-10, 12-20, and 22-27 that depend directly or indirectly from allowable independent claims 1, 11, and 21, respectively, are also in condition for allowance.

Therefore, Applicants respectfully request that the Examiner withdraw the objection to claims 5-7, 10, 15-17, and 20 because said claims are in condition for allowance.

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ADDITIONAL CLAIM AMENDMENTS

In addition to the claim amendments set forth above, additional amendments have been made to claims 2, 4, 5, 10-12, 14, 15, and 21-27 to improve grammar and clarity and/or correct typos. No new matter has been added by these Amendments. Moreover, Applicants reserve the right to present the amended claims in their original form in one or more continuation applications.

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CONCLUSION

In view of the foregoing discussion and amendments, Applicants respectfully submit that claims 1-27 as amended are in a condition for allowance, which action is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Amendments and Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

Respectfully submitted,
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